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### **TRANSLATION FROM GERMAN**

(19) Federal Republic of Germany

(12) Unexamined Patent Application DE 41 09 334 A1

(51) Int. Cl.<sup>5</sup>: G 10 D 3/10

(21) Registration No.: P 41 09 334.8

(22) Filing Date: March 21, 1991

(43) Disclosure Date: November 12, 1992

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Examination request is filed according to § 44 of the Patent Law

(54) Treble String Set for Classical Guitar and Flamenco Guitar

(57) Each of the three strings in a treble string set for classical guitar and flamenco guitar has a core consisting of numerous individual plastic threads. A metal wire forming a metal layer is wound around this core and a plastic strip is wound around the metal layer as protective layer.

## **Specification**

The invention concerns a treble string set for classical guitar and flamenco guitar consisting of three wound strings with a plastic core.

Such strings have a single-piece nylon core wound with a nylon thread. The known strings have relatively large diameter and are therefore difficult to play and have a sound spectrum that leads to a rather attenuated tone. However, one-layer strings made of nylon are generally used for classical guitar and flamenco guitar. These also still have relatively large string diameter and the string tension can only be relatively low so that professional playing is adversely affected, especially in terms of playing tempo and tone color or loudness.

The underlying task of the invention is to devise a treble string set for classical guitar and flamenco guitar in which the string thickness is reduced and the usual tension for the strings is increased.

The task is solved by a treble string set of the type mentioned in the introduction in that the core of each string consists of numerous individual plastic threads, that a metal wire forming a metal layer is wound around this core and that a plastic strip is wound as a protective layer around the layer consisting of metal wire.

On the one hand, these strings can be designed with more limited string diameter and, on the other hand, the tension for the strings is substantially increased. The strings also have high resonance capability and long reverberation. In comparison with known strings the tone is clear and precise with a high number of harmonics that convey a type of "silver tone". An instrument strung with strings according to the invention has a loud sound. The protective layer consisting of the metal strip prevents displacements of the individual windings of the metal layer which could occur from utilization, especially at the mounting sites of the strings.

Advantageous modifications are characterized by the subclaims. In particular, in designing the core from individual nylon threads the string diameter can be sharply reduced with a simultaneous increase in tension relative to strings with a single-piece nylon core.

A practical example of a string for the treble string set according to the invention is described below with reference to the drawing. The figure shows a perspective view of a partially cut away string.

The string has a core 3 consisting of a large number of individual nylon threads 4, some of which are shown in section on the right end of the depicted string piece. In an actual variant the nylon threads 4 all lie right next to each other so that they border each other. The core 3 consisting of the nylon threads is wrapped by a metal wire 5 so that the metal winding lies on the core winding on winding. The metal wire 5 is rectangular in cross section and since it is wound onto core 5 winding next to winding an essentially continuous metal layer 2 is formed over the core 3 of nylon threads 4. The metal wire 5 preferably consists of copper, zinc, brass or bronze. A plastic strip 6 of rectangular cross section that protects the metal layer against wear, especially at the mounting sites of the string, is wound over the metal layer 2 opposite the direction of winding of metal wire 5. The protective layer 1 stabilizes the underlying metal layer 2 against displacements of the individual metal windings, which leads to more limited wear and thus better lifetime of the string. The plastic strip 6 has a thickness of 0.050 mm to 0.070 mm.

The diameter of the strings is preferably adjusted so that adjusted acoustic properties are produced. The tension that can be used for the strings is about double that of ordinary strings. The strings can be very easily played because of their relatively limited diameter.

### Claims

1. Treble string set for classical guitar and flamenco guitar, consisting of three wound strings with a plastic core, characterized by the fact that the core (3) of each string consists of numerous individual plastic threads (4), that a metal wire (5) forming a metal layer (2) is wound around this core and that a plastic strip (6) is wound around the layer consisting of metal wire as a protective layer (1).
2. Treble string set according to Claim 1, characterized by the fact that the plastic threads of core (3) are nylon threads (4).
3. Treble string set according to Claim 1 or 2, characterized by the fact that the metal wire (5) forming the metal layer (2) consists of copper, zinc, brass or bronze.

4. Treble string set according to one of the Claims 1 to 3, characterized by the fact that the plastic strip (6) forming the protective layer (1) has a thickness between 0.050 mm and 0.070 mm.

5. Treble string set according to one of the Claims 1 to 4, characterized by the fact that the thickness of the metal layer (2) is 0.050 mm to 0.070 mm.

6. Treble string set according to one of the preceding Claims, [characterized by the fact] that the metal wire (5) forming the metal layer (2) and the plastic strip (6) forming the protective layer (1) are wound in opposite directions.

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